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10/686,785

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EXAMINER

PATEL, GAUTAM

ART UNIT

PAPER NUMBER

2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/686,785

Applicant(s)

KIM ET AL.

Examiner

Gautam R. Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-20, 22-24, 26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-20, and 28-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-10, 12-20, 22-24, 26 and 28-29 are pending for the examination.

RESTRICTION/ELECTION

2. The Applicants are urged to cancel non-elected claims 22-24 and 26 to simplify and expedite prosecution.

RCE STATUS

3. The request filed on 3/19/07 for Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10, 12-20 and 28-29 are rejected under 35 U.S.C. § 102(e) as being anticipated by Yanagawa et al., US. patent 6,346,695 (hereafter Yanagawa).

As to claim 1, Yanagawa discloses the invention as claimed [see Figs. 4, 1, 12] including a light source, a grating, a reflecting member, a monitoring photodetector, an optical path changer, an objective lens and a signal detecting photodetector, comprising:

a light source [fig. 4, unit 20] which emits light;

a grating [fig. 4, unit 23] which separates a portion of the light emitted from the light source;

a reflecting member [fig. 4, unit 51a & 51b] which reflects another portion of the light emitted from the light source;

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a monitoring photodetector [fig. 4, unit 24 and/or 39] disposed on a traveling path of the light reflected from the reflecting member and which measures the reflected light;

an optical path changer [fig. 4, unit 51] which changes an optical path of the light separated by the grating;

an objective lens [fig. 4, unit 29] which condenses the light the optical path of which is changed onto a disc [fig. 4, unit 30] [col. 8, unit 57-65]; and

a signal detecting photodetector [fig. 4, unit 33] which receives the light reflected from the disc, wherein the signal detecting photodetector is arranged such that optical noise due to reflection of light by the signal detecting photodetector is not received by the monitoring photodetector, enabling the monitoring photodetector to accurately determine a power of recording light, wherein focusing servo and tracking servo operations [col. 6, lines 22-60] are performed using a light signal output by the signal detecting photodetector based, at least partially, on light reflected from the disc [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

5. The aforementioned claim 2, recites the following elements, inter alia, disclosed in Yanagawa:

the light source is a laser diode [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

6. The aforementioned claim 3, recites the following elements, inter alia, disclosed in Yanagawa:

the grating has an effective aperture through which the portion of the light which is separated passes, wherein any portion of the light traveling outside of the effective aperture is ineffective light, and wherein the reflecting member is disposed on an optical path of at least a portion of the ineffective light and reflects the least a portion of the ineffective light [col. 7, line 44 to col. 8, line 9; col. 8, lines 45-62].

7. The aforementioned claim 4, recites the following elements, inter alia, disclosed in Yanagawa:

the reflecting member is disposed around the grating [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

8. The aforementioned claim 5, recites the following elements, inter alia, disclosed in Yanagawa:

the reflective member is a mirror [fig.4, units 51a & 51b] [col. 8, lines 45-62].

9. The aforementioned claim 6, recites the following elements, inter alia, disclosed in Yanagawa:

the reflecting member is disposed only in a portion of a peripheral portion of the grating [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

10. The aforementioned claim 7, recites the following elements, inter alia, disclosed in Yanagawa:

the optical path changer is one of a beam splitter [fig. 4, unit 51] which reflects or transmits incident light by a ratio according to a reflective coating of the beam splitter and a polarized beam splitter which reflects or transmits incident light according to a polarization direction of the incident light [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

11. The aforementioned claim 8, recites the following elements, inter alia, disclosed in Yanagawa:

the signal detecting photodetector detects a focusing servo signal and a tracking servo signal from the received reflected light [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

NOTE: inherently done without which system will not work. Applicants are merely describing how a system works.

12. The aforementioned claim 10, recites the following elements, inter alia, disclosed in Yanagawa:

it is determined whether a power of the light measured by the monitoring photodetector is lower or higher than a reference value, and when a power of the light measured by the monitoring photodetector is one of lower and higher than the reference value, the power of the

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light source is controlled so that the power of the light measured by the monitoring photodetector is the reference value [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

NOTE: In this claims Applicants are merely claiming how a power monitoring is done.

13. As to claim 12, it is rejected for the similar reasons set forth in the rejection of claims 1 & 3, above.

14. The aforementioned claim 13, recites the following elements, inter alia, disclosed in Yanagawa:

the monitoring photodetector is adjacent to an outer sidewall of the grating [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

15. As to claims 14, 16-20, they are claims corresponding to claims 2, 9, 7-8, 6, 10 respectively and they are therefore rejected for the similar reasons set forth in the rejection of claims 2, 9, 7-8, 6, 10 respectively, above.

16. The aforementioned claim 15, recites the following elements, inter alia, disclosed in Oohchida:

an optical path changer disposed between the grating and the objective lens and changes an optical path of light incident thereon [col. 5, line 45 to col. 6, line 40; col. 8, lines 45-62].

17. As to claim 28, it is rejected for the similar reasons set forth in the rejection of claims 1, above.

18. As to claim 29, it is rejected for the similar reasons set forth in the rejection of claims 1, above.

Claim Rejections - 35 U.S.C. § 103

19. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yanagawa as applied to claims 1 and 12 above.

Regarding claim 9 Yanagawa discloses all of the above elements including a collimating lens [fig. 4, unit 21]. Yanagawa does not specifically disclose that this collimating lens is disposed between optical path changer and the objective lens to the extent claimed. The limitations in claim 9 does not define a patentable distinct invention over that in Yanagawa since both the invention as a whole and Yanagawa are directed to APC so as to adjust the power of optical pickup. The placement of collimator lens presents no new or unexpected results, so long as the rays are collimated and the assembly is moved in a successful way. If one has rays which are not parallel before reaching objective lens one must place collimator lens right before objective lens and if one has rays coming out of diode which are not parallel one place collimator lens right before the diode. Therefore, to have placed collimator lens between objective lens and beam splitter would have been routine experimentation and optimization in the absence of criticality.

SECOND: It should also be pointed out that this kind of arrangement is well known in the art as disclosed by the Applicants themselves [see fig. 1, PRIOR ART].

THIRD: Also shifting location of the parts in the system is well known in the art. It would have been obvious to a person of ordinary skill at the time of the invention to have rearranged this collimator lens in the system of Yanagawa because doing so would make the rays parallel where needed. As shown in “In re Japikse 86 USPQ 70 (CCPA 1950)” these adjustments such as to shift location of parts generally not given patentable weight or would have been obvious improvements.

20. Applicant's arguments with respect to above claims have been considered but are moot in view of the new grounds of rejection.

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Other prior art cited

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) zx et al. (US. Patent xcv) "nmb..".
- b) zx et al. (US. patent) "cv".
- c) zc (US. patent) "nvm".
- d) zc (US. patent) "nmb".
- e) zc (US. patent) "mnb".
- f) zc (US. patent) "bnm".

Contact information

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2600) where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dwayne Bost, who can be reached on (571) 272-7023.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.



**GAUTAM R. PATEL
PRIMARY PATENT EXAMINER**

Gautam R. Patel
Primary Examiner
Group Art Unit 2627

May 5, 2007